

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

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REMARKS

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In the Office Action, the Examiner noted that claims 1, 3-10, 12-21 and 23-28 are pending in the application and that claims 1, 3-6, 9-10, 12-18, 21 and 23-28 stand rejected. The Examiner further noted that claims 7, 8, 19 and 20 are objected to. All claims are unamended by this response.

In view of the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. Thus the Applicant believes that all of these claims are now in allowable form.

Rejections

A. 35 U.S.C. § 102

The Examiner rejected the Applicant's claims under 35 U.S.C. § 102(b) as being anticipated by Tokumitsu et al. (U.S. Patent 5,513,166, hereinafter "Tokumitsu"). The rejection is respectfully traversed.

The Examiner alleged that Tokumitsu anticipates the Applicant's invention. The Applicant respectfully disagrees.

The Applicant respectfully submits that the Tokumitsu reference fails to teach, suggest or disclose each and every element of at least the Applicant's invention as recited in at least the Applicant's amended, independent claim 1, which specifically recites:

"A method of detecting defects in a recordable optical storage medium, comprising the steps of:

accessing a portion of the recordable storage medium wherein new data is to be recorded; and

selectively examining data in said accessed portion for defects prior to recording said new data;

wherein if defects are detected in the data in said accessed portion, corrective measures are taken such that the new data to be recorded is not recorded in said accessed portion having defects." (emphasis added).

CUSTOMER NO.: 24498
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PATENT
PU010200

The Applicant's invention is directed at least in part to a method and system for detecting defects in a recordable optical storage medium where at least a portion of the recordable storage medium in which new data is to be recorded is examined for defects. In one embodiment of the invention of the Applicant, if previously recorded data exists in the accessed portion, the old data is reproduced and examined for defects **prior to recording the new data**. In the invention of the Applicant, if the examined old data in the accessed portion of the storage medium exhibits defects, corrective measures are taken such that **the new data to be recorded is not recorded in said accessed portion having defects**. In support of the Applicant's invention, at least as claimed by the Applicant's amended claim 1 recited above, the Applicant in the Specification, specifically recites:

"Specifically, a segment of multimedia data that has been recorded onto a first portion of a recordable storage medium can be accessed, and the data can then be selectively examined to determine whether the first portion contains a defect. The data that is examined can be data that has just been recorded during a current recording session or data that has been previously recorded and is being played back. If a defect is detected, then a number of corrective measures can be taken including: generating a defect message; storing the address of the first portion of the recordable storage medium in a table; writing the segment of data onto a second portion of the recordable storage medium; and modifying the selectively examining step." (See Applicant's Specification, page 11, lines 4-13).

And

"In another arrangement, test data can be written onto at least a portion of the recordable storage medium **prior to or during the step of writing the actual data to be recorded onto that portion of the medium**. Specifically, a portion of the recordable storage medium can receive the test data. Once the test data is recorded onto the medium, the test data can then be selectively examined - similar to the examining process described above in step 214 - to determine whether the recording area contains one or more flaws." (See Applicant's Specification, page 16, lines 17-23).

The Applicant, in the Specification, further recites:

"If a defect is detected, then a defect message can be generated and/or the address of the portion of the recordable storage medium which contains the defect can be stored in a table for future reference, as discussed in step 222 of flowchart 200. Thus, a user can be made aware of

CUSTOMER NO.: 24498
Serial No. 09/963,244
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Response dated: 12/26/06

PATENT
PU010200

the suitability of a storage medium's recording capability prior to the actual recording." (See Applicant's Specification, page 17, lines 12-16).

And

"**Specifically, before a segment of actual data is written to a portion of the medium, test data can be written to that portion of the medium and searched for errors. If the portion of the medium contains no defects, then the actual data can be recorded onto that portion of the medium and the process can continue.**

If a defect is discovered, then one or more of the previously discussed corrective measures of step 222 of flowchart 200 can be performed. For example, a defect message can be generated and/or the address of the portion of the recordable storage medium which contains the defect can be stored in a table for future reference. Moreover, the test data can be recorded onto another area of the medium, and the test data can also be examined again to ensure that the new medium area receiving the test data contains no defects. Once a suitable area has been located, the actual data can be recorded there, and the process of alternately writing test and actual data can continue." (See Applicant's Specification, page 17, line 21 through page 18, line 9).

In support of at least the Applicant's amended claim 1, the Applicant specifically teaches, as clearly depicted by at least the portions of the Applicant's Specification depicted above, a method and system for detecting defects in a recordable optical storage medium including playing back multimedia data that has been recorded during a previous recording session to determine whether an accessed portion of the storage medium contains a defect and alternatively recording multimedia data (test data) and examining the multimedia data (test data) to determine whether the portion of the disc that the test data was written on contains defects all prior to recording the actual data. The Applicant specifically teaches that in one arrangement the test data is written to the medium prior to the recording of the actual data and that alternatively, the test data can be written to the medium during a recording session of the actual data but still prior to writing the actual data to a portion of the medium. That is, in at least the claimed invention of the Applicant at least with respect to claim 1, a portion of a medium wherein it is desired to write actual data is always tested prior to writing the actual data, **such that actual data to be recorded is not recorded in a portion of the medium having defects.** In the invention of the Applicant, the testing of the media for defects before actually

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

attempting to record actual, desired content supports real time recording and recovery in a manner superior to that of Tokumitsu.

More specifically, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Tokumitsu for a method and system for detecting defects in a recordable optical storage medium including at least "selectively examining data in said accessed portion for defects prior to recording said new data" "wherein if defects are detected in the data in said accessed portion, corrective measures are taken such that the new data to be recorded is not recorded in said accessed portion having defects" as taught in the Applicant's Specification and claimed by at least the Applicant's amended claim 1 and amended claim 12.

More specifically, Tokumitsu teaches an optical information recording method and apparatus for performing the pre-write testing of test data for an optical recording medium connected to a host computer. In Tokumitsu, an instruction for pre-write testing of test data inclusive of two predetermined continuous signals is received independently from a write command from the host computer. The pre-write testing of the test data is performed by supplying different laser driving currents for plural ones of pre-write testing areas of the optical recording medium to an optical information recording head in accordance with the pre-write testing instruction. The respective pre-write testing data are reproduced to determine a difference in an average voltage level between the two continuous signals of each test data. The laser driving current supplied for the pre-write testing of the test data indicative of the smallest value of the difference is set as a laser driving current which is to be supplied to the optical information recording head when the recording of user data is to be performed. (See Tokumitsu, Abstract)

In contrast to the invention of the Applicant however, Tokumitsu specifically recites:

"When receiving a write command from the CPU 1, the magneto-optical disk controller 2 performs the positioning of the magneto-optical head (step 61). Thereafter, data to be written is received and a check for writing and reading of the data is made (step 62). In step 63, the judgement is made of whether or not there is a block which is defective in recording. If

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

there is no block which is defective in recording, the processing is completed. If there is a block which is inferior in recording, the judgement is made of whether or not a pre-write processing is to be performed or whether or not the number of defective blocks is not smaller than a predetermined number (step 64)." (See Tokumitsu, col. 8, lines 19-31).

That is, in contrast to the invention of the Applicant, and as clearly evident from at least the portion of the disclosure of Tokumitsu presented directly above, in Tokumitsu, during a write command which is received from the CPU, the magneto-optical disk controller performs the positioning of the magneto-optical head and data to be written (new data) is received and written to the disk and read back to determine whether or not there is a block which is defective in recording. More specifically, as evident from at least the portion of the disclosure of Tokumitsu depicted above, Tokumitsu specifically teaches away from the invention of the Applicant. That is, in Tokumitsu actual desired data is written onto a recording disk and then the recorded actual data is reproduced and tested for errors. This is in direct contrast to the teachings and claims of the Applicant, wherein old data or test data in an accessed portion of a medium is reproduced and examined for defects, prior to recording actual data of interest onto the accessed portion of the medium. That is, there is absolutely no teaching, suggestion or disclosure in Tokumitsu for at least "selectively examining data in said accessed portion for defects **prior to recording said new data**" "wherein if defects are detected in the data in said accessed portion, corrective measures are taken such that the new data to be recorded is not recorded in said accessed portion having defects" as taught in the Applicant's Specification and claimed by at least the Applicant's amended claim 1 and amended claim 12.

Even further, even if the Examiner is equating the pre-write testing of Tokumitsu to the "selectively examining data in said accessed portion for defects **prior to recording said new data**" step of the Applicant's invention, Tokumitsu still absolutely fails to teach, suggest or anticipate that such examining is performed such that "wherein if defects are detected in the data in said accessed portion, corrective measures are taken such that the new data to be recorded is not recorded in said accessed portion having defects". That is, in Tokumitsu, even after the pre-write testing is performed, new data is still recorded in portions

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

having defects because in Tokumitsu, the new data to be recorded is used to test portions of the disk.

For at least the reasons described above, the Applicant respectfully submits that the teachings of Tokumitsu fall far short of the Applicant's claimed invention, at least with respect to amended, independent claims 1 and 12.

As such and at least because the teachings of Tokumitsu teach away from the invention of the Applicant and because Tokumitsu fails to teach, suggest or disclose at least "selectively examining data in said accessed portion for defects prior to recording said new data" "wherein if defects are detected in the data in said accessed portion, corrective measures are taken such that the new data to be recorded is not recorded in said accessed portion having defects" as taught in the Applicant's Specification and claimed by at least the Applicant's amended claim 1, the Applicant respectfully submits that the teachings and disclosure of Tokumitsu do not teach each and every element of the Applicant's claimed invention, arranged as in the claim, and as such, Tokumitsu does not anticipate the Applicant's invention, at least with respect to amended, independent claim 1.

Therefore, the Applicant submits that for at least the reasons recited above amended, independent claim 1 is not anticipated by the teachings of Tokumitsu and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, amended, independent claim 12 recites similar relevant features as recited in the Applicant's independent claim 1. As such, the Applicant submits that for at least the reasons recited above, independent claim 12 is also not anticipated by the teachings of Tokumitsu and also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 3, 5, 9-10, 13 and 23-28 depend either directly or indirectly from independent claims 1 and 12 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 3, 5, 9-10, 13 and 23-28 are also not anticipated by the teachings of Tokumitsu. Therefore the Applicant submits that

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

dependent claims 3, 5, 9-10, 13 and 23-28 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

B. 35 U.S.C. § 103

The Examiner rejected the Applicant's claims 1, 3-6, 9, 10, 12-18, 21 and 23-28 under 35 U.S.C. § 103(a) as being unpatentable over Lee et al. (6,788,630, hereinafter "Lee") in view of Ohara et al. (U.S. Patent 6,097,683, hereinafter "Ohara"). The rejection is respectfully traversed.

The Examiner cites Lee for teaching various aspects of the Applicant's invention. The Applicant respectfully disagrees.

The Examiner concedes that Lee fails to teach, suggest or make obvious the reading of accessed sectors prior to recording of new data as taught and claimed by the Applicant. The Applicant agrees with the Examiner's concession. That is, the Applicant submits that Lee absolutely fails to teach, suggest or make obvious at least "accessing a portion of the recordable storage medium wherein new data is to be recorded" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

The Applicant further submits that the teachings of Ohara absolutely fail to bridge the substantial gap between the teachings of Lee and the invention of the Applicant. More specifically, the Examiner cites Ohara for teaching "accessing a portion of the recordable storage medium wherein new data is to be recorded" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. The Applicant respectfully disagrees. The Applicant submits that any allowable combination of the teachings of Lee and Ohara fall far short of the Applicant's claims.

More specifically, Ohara teaches an information recording/reproducing apparatus and a method of recording data onto an information recording/reproducing media. In Ohara, the information recording/reproducing apparatus has the capability of handling the information recording/reproducing media both when they are not in a case and when they are in a case. A recording mode is

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

selected basing on the determinations of (i) whether or not the recording/reproducing medium is a medium type which is necessarily contained in a case at recording and (ii) whether the case is present or absent. (See Ohara, Abstract).

In contrast to the invention of the Applicant, in Ohara, upon a history determining means detecting the absence of an identification member, a user is offered an option whether or not to perform a verification mode. If a user opts to perform the verification mode, a verification means verifies newly recorded information that is intended to remain on a disc. More specifically, Ohara specifically recites:

"Thus, since the user decide whether to perform the verification or not, a problem is solved that the recording speed is reduced by always performing the verification.

Step 4 (ST4): At this step, normal recording is performed by the recording means 35. When recording is completed, the operation is terminated without the verification being performed and the process waits for the next direction from the user.

Step 5 (ST5): The information the user intends to record is recorded by the recording means 35 and the process proceeds to step 6.

Step 6 (ST6): The verifying means 34 verifies the information recorded at step 5.

Specifically, (1) the area recorded just now is reproduced, and (2) simultaneously therewith, the error correcting circuit is actuated to check the number of errors." (See Ohara, col. 11, lines 7-22).

As evident from at least the portion of the disclosure of Ohara depicted above, Ohara specifically teaches away from the invention of the Applicant. More specifically, in Ohara actual desired data is written onto a recording medium and then the recorded actual data is reproduced and tested for errors. This is in direct contrast to the teachings and claims of the Applicant wherein old data or test data in an accessed portion of a medium is reproduced and examined for defects, prior to recording actual data of interest onto the accessed portion of the medium. That is, in Ohara data in an accessed portion of a recording medium that is examined for defects is the **new data** that was recorded in the accessed portion. As such, the Applicant submits that Ohara teaches away from the invention of the Applicant at least with respect to "selectively examining data in said accessed portion for defects prior to recording said new data" as taught in the Applicant's

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

Specification and claimed by at least the Applicant's claim 1. In contrast, in Ohara a portion of the recordable storage medium that is accessed is specifically accessed because new data was recorded in that portion and the newly recorded data is used to test for defects.

As such, the Applicant submits that any combination of Lee and Ohara would still fall far short of the Applicant's invention at least with respect to claim 1. More specifically, a combination of Lee and Ohara would teach an optical disk wherein previously recorded data is verified for errors and if the errors exist, then data is recorded on another area of the disk, wherein new data to be recorded is recorded on a portion of the disk and that portion of the disk is then accessed and the new data recorded is examined for detecting defects in that accessed portion. The Applicant submits that such a combination is in direct contrast and teaches away from the Applicant's invention at least with respect to "accessing a portion of the recordable storage medium wherein new data is to be recorded" and "selectively examining data in said accessed portion for defects prior to recording said new data" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

As such and at least because the teachings of Lee and Ohara, alone or in any allowable combination, fail to teach, suggest or make obvious the invention of the Applicant at least with respect to "accessing a portion of the recordable storage medium wherein new data is to be recorded" and "selectively examining data in said accessed portion for defects prior to recording said new data" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1 and actually teach away from the invention of the Applicant, the Applicant respectfully submits that the teachings and disclosure of Lee and Ohara, alone or in any allowable combination, do not render obvious the invention of the Applicant, at least with respect to independent claim 1.

Therefore, the Applicant submits that for at least the reasons recited above amended, independent claim 1 is not rendered obvious by the teachings of Lee and Ohara, alone or in any allowable combination, and, as such, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

Likewise, independent claim 12 recites similar relevant features as recited in the Applicant's independent claim 1. As such, the Applicant submits that for at least the reasons recited above, independent claim 12 is also not rendered obvious by the teachings of Lee and Ohara, alone or in any allowable combination, and also fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder.

Furthermore, dependent claims 3-6, 9-10, 13-18, 21 and 23-28 depend either directly or indirectly from independent claims 1 and 12 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 3-6, 9-10, 13-18, 21 and 23-28 are also not rendered obvious by the teachings of Lee and Ohara, alone or in any allowable combination. Therefore the Applicant submits that dependent claims 3-6, 9-10, 13-18, 21 and 23-28 also fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder.

Applicant's Note

The Examiner makes reference to the art of PDL and SDL but failed to submit any references relating to that art or enough details of the specific portions of the art on which the Examiner relies for attempting to anticipate the invention of the Applicant. As such, the Applicant submits that the Applicant was not provided with enough specificity of the Examiner's rejection under that art to provide an adequate response to the Examiner's statements. For example, as alleged by the Examiner, Lee also teaches that previously recorded data is verified for errors and if the error exists, then data is recorded on another area of the disk, but fails to teach the reading of accessed sectors prior to recording new data.

As such, the Applicant is going to require further specificity of the specific sections of the art of PDL and SDL that the Examiner is relying on to anticipate the Applicant's invention to submit a complete response.

Conclusion

The Applicant would like to thank the Examiner for pointing out allowable subject matter, however the Applicant believes that at this time all of the

CUSTOMER NO.: 24498
Serial No. 09/963,244
Reply to Office Action dated: 8/30/06
Response dated: 12/26/06

PATENT
PU010200

Applicant's claims presently in the application are allowable over the cited references.

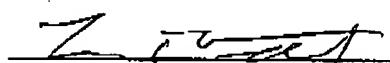
That is, the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,
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